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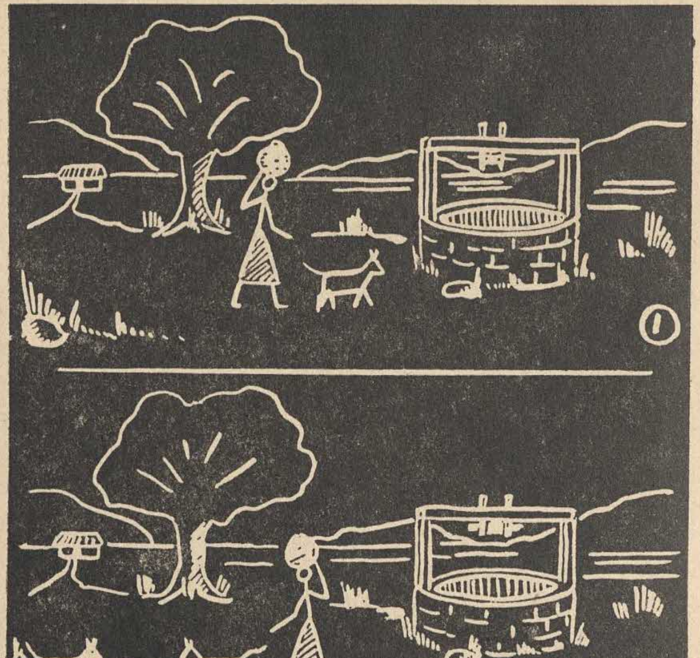
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Blackboard Work

by

H. G. RAMSHAW

adapted for use in India

by

DAVID HORSBURGH

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1. General Rules. The Straight Line

1. Skill in blackboard work is not difficult to learn, but it does need hard work and a lot of practice. If you are prepared to follow the instructions in this book, and to practise regularly the methods here described, you can become quite skilled in using the blackboard as an aid to your teaching.

2. First of all you must learn to see things—not just to look at them, but to observe them closely and really *see* them. Then you must train your hand to set down accurately what your eye sees. You will find that as you progress, you will take a real interest in this subject; good work on the blackboard will become a pleasure rather than a labour. You will, in fact, take a pride in always producing a high standard of blackboard work, and, through it, your teaching will be greatly improved.

3. Now blackboard work is very much a practical subject, and the greater part of this book will deal with practical exercises. But, as we go along, I shall introduce some rules and suggestions which will be of assistance to you. There

are certain simple rules which you should know before we start, because they apply to almost all work on the blackboard. They are these:

(i) Always use firm, clear and bold lines.

(ii) Draw your lines reasonably quickly—this does not mean that you should work carelessly, but at a reasonably steady speed.

(iii) Make your work as large as the blackboard area will allow.

(iv) Keep your work *simple.* (You will understand more fully the importance of this rule as we progress through the course.)

One reason for the above rules will be clear if you remember that work on the blackboard is intended to illustrate something to a group or a class of children, some of whom may be quite a long way from the board, and blackboard work often has to be done *while you are giving a lesson.*

4. Now let us get down to some practical work. (I am assuming that you have a blackboard in front of you.)

(*a*) *Stance.* Usually, the most convenient place to stand is towards the left side of the board, as this allows you to turn from the board to the class, and from the class to the board most easily. For this exercise, however, you should stand a little more towards the centre of the board.

(*b*) *Holding the Chalk.* Take half a stick of chalk (this is much better to work with than a whole stick) and hold it between the thumb and forefinger so that an inch or less projects.

5. Draw a horizontal line right across the board.

Your first line may not be very straight, and you will probably find that it falls away down the board at the right-hand end.

6. Now try again using this method :

(*a*) Put your hand with the chalk close to the board, and, with the backs of your third and fourth fingers lightly touching the board, move your hand right across the board from left to right and from right to left two or three times, but without touching the board with the chalk.

(*b*) At the same time keep your right elbow fairly close to the board.

(*c*) While your hand and arm are moving backwards and forwards, allow your body to move easily with them, changing your weight from your left foot to your right and then back again.

(*d*) After doing this two or three times, put the chalk firmly against the board and draw the line —steadily but fairly quickly.

7. You will find this method gives you a much better line. Practise this *often*. Next draw a number of horizontal lines across the board at

the same distance from each other. After several periods of practice you will find that you are able easily to draw true horizontal lines freehand, and you will rarely need your blackboard ruler.

8. Vertical lines are easier. Stand immediately in front of where you want to draw the line. Move your hand, with the back of the fingers lightly touching, up and down the board two or three times; then put the chalk on the board and draw the line. Keep your body flexible.

9. Next try drawing straight lines diagonally across the board from the left top corner to the right bottom corner, and from the right top corner to the left bottom corner, in the same manner.

Remember two of the rules with which we started—use clear bold lines, and draw them steadily but fairly quickly.

Practise.

2. Squares and Triangles. 'Proportion'

1. Each of the chapters in this book deals with a particular piece of work which must be learnt and then practised. The practice will require several periods. This is especially so in the case of the first three chapters, because all the later work is based on the drawing methods you learn in these early chapters. Your progress later on will depend on how well you have practised and mastered these basic methods.

2. I expect, then, that you have already put in a lot of practice in the drawing of horizontal, vertical and diagonal lines. We shall now go on to use these lines to make shapes. We will first of all draw a *Square*. A square is a figure enclosed by four lines of equal length, and in which each of the angles is a right angle. (Think of it as being two horizontal lines joined by two vertical lines.)

Draw it this way.

(*a*) Draw a horizontal line across the board near the top—it should be about half the width of the board. Work firmly and fairly quickly.

(*b*) From the left-hand end of this line, draw

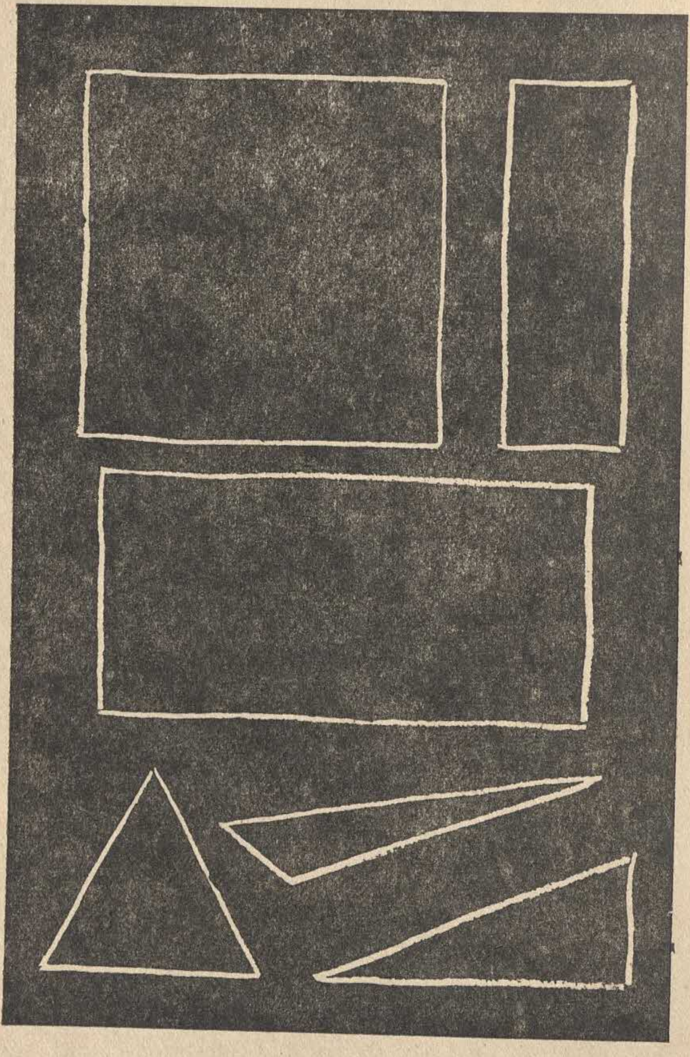


PLATE 1

a vertical line downwards and make it about the same length as the first line. Draw a similar line from the right-hand end of the first line.

(*c*) Now draw a second horizontal line joining the bottom ends of the two vertical lines.

(*d*) Measure with your hand—the thumb and little finger outstretched—to see whether your horizontal lines and vertical lines are about equal. If they are not, try doing the whole drawing again, and repeat the exercise until you can produce a good square in this freehand manner.

3. We should now learn something about the idea of *Proportion*. Proportion means the relationship between sizes—between the sizes of one thing and another—or between the sizes of different parts of one thing. If you are to make good pictures of things or animals or people, you must study this idea of proportion, in order to get the sizes of their different parts in the right relationship to each other.

Take, for instance, the floor of the room in which you are working. Measure the length of the walls. Is each wall the same length? If so, the floor will be a square, It is more likely that two walls will be longer than the other two—perhaps the length is about forty feet and the breadth about twenty feet. If we were drawing a plan of this room, it would be important to show the true relationship between the length and the breadth—in fact to show them in the right proportion.

The same rule applies to almost all drawing. If you were making a picture of a man, and you drew his head larger than his body, your drawing would be 'out of proportion'. We will return to this idea of proportion later on when we come to draw common objects, animals and people.

4. Now go back to the blackboard and draw not a square but a shape in which the length of the horizontal lines is twice that of the vertical lines. This shape is an 'oblong' or a 'rectangle'. Practise drawing rectangles in different proportions; in some of them the horizontal lines should be the short lines, and the vertical lines the long ones.

5. Next practise the drawing of 'triangles'—that is, figures enclosed by only three straight lines. The three lines need not be the same length, of course, so you can produce many different sorts of triangles.

In all this work draw with firm, clear strokes, and reasonably quickly. In drawing these shapes at first, you may, if you wish, measure the length of lines first with your outstretched hand; but the important thing is to learn to measure with your eye, and make your hand obey your eye. *Practise* drawing these shapes regularly. They will be very useful to you later on.

3. Curves, Circles and Ellipses

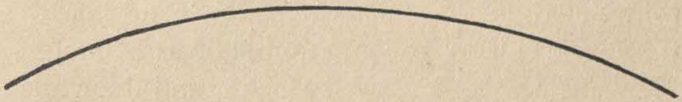
1. We now have to learn to draw curved lines. You may find these more difficult to produce at first, but if you follow the instructions in this chapter carefully you will soon be able to draw them just as well as you do the straight lines.

2. Before you start on the blackboard, bear these points in mind:

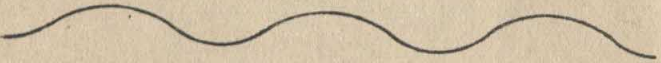
(*a*) When you are drawing curved lines your wrist and arm must be quite flexible. You cannot draw a good curved line with a stiff arm and wrist.

(*b*) As with the previous drawing you have done, you must work reasonably quickly. It is difficult to draw slowly a good, even, graceful curve.

3. With the chalk in your hand, but away from the blackboard, practise drawing a curved line 'in the air' from left to right, like this:



Now go up to the blackboard and draw a line of this sort right across the board. It will help if you follow the method given in Chapter 1—to make a few strokes first with just the tips of your fingers touching the board before you put on the chalk and actually draw the line. Now try drawing 'wavy' lines of this sort across the board:



You will find it difficult to draw even, regular curves unless you remember the instructions given in paragraph 2—(*a*) keep your arm and wrist flexible and (*b*) draw fairly quickly but steadily.

4. The perfect curve is the circle—and because it is found so often in natural objects, and also in man-made things, you must be able to draw a good circle on the blackboard. Here is one way of doing it:

With the chalk in your hand, go up to the board, and place your right elbow on the centre of the board, with your forearm and hand pointing almost vertically downward. (Where your elbow is almost touching the board is going to be the centre of the circle, and where your hand is with the chalk will be the 'bottom' of the circle.) Now make a few practise swings round the circle clockwise, then put your chalk on the board and draw the circle. You will probably find this a little difficult at first. But if you bear in mind

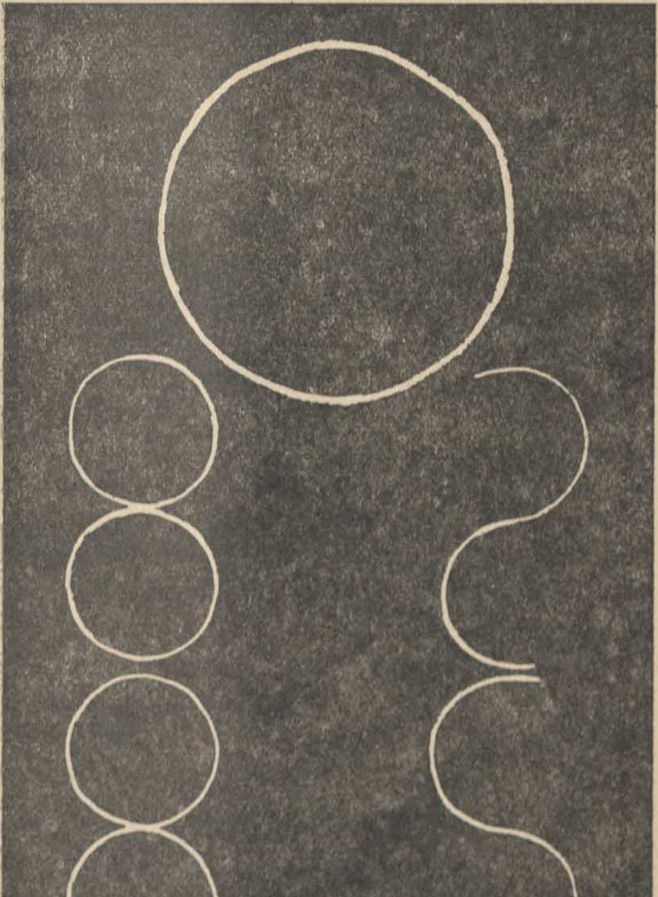


PLATE 2

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again the instructions in (*a*) and (*b*) above, and *practise*, you will soon learn to draw an almost perfect circle freehand.

5. An 'ellipse' is like a flattened circle. It is the shape you see when you look at a circular object from the side, if the object is above or below your eye level. Put a bucket, or a large pot, just below your eye level, and the top, which you know is a circle, will appear as an ellipse.

These shapes often appear in common objects, so you should practise drawing ellipses, some broad and some narrow. Notice that the ends of an ellipse are true curves and not pointed. Practise drawing some of the objects shown at the bottom of Plate 3.

6. One last exercise. Practise drawing large S shapes on the board—some facing right and others facing left. Notice that this shape is based on the halves of two circles as shown on the right-hand side of Plate 2. This is a good exercise for developing flexibility and smoothness in the drawing of curves. Practise drawing these S-curves until you can do them perfectly.

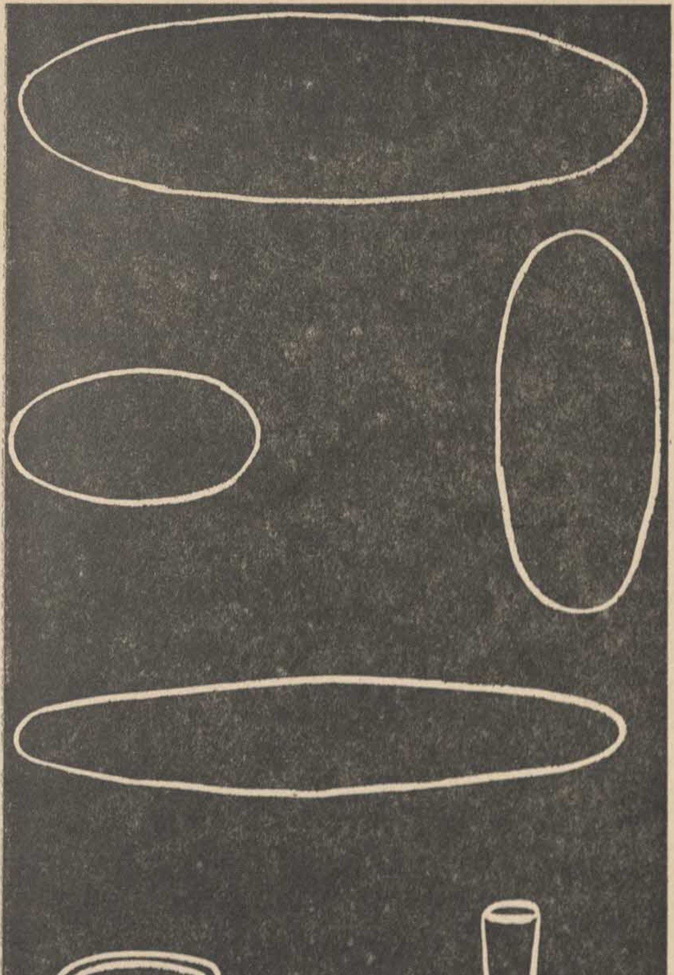
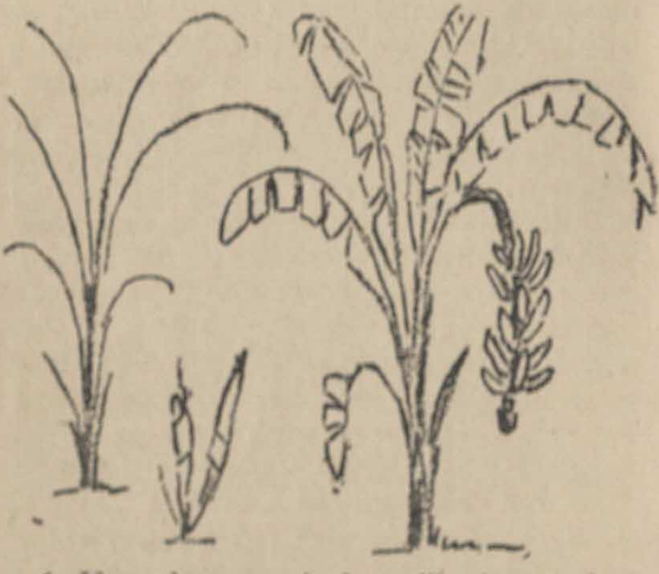


PLATE 3

4. Essential Line. Trees



1. If you have practised steadily the exercises given in the first three chapters, you will have done the hardest work in this course. Almost all the objects you will need to draw on the blackboard, natural objects and man-made things, even animals and men themselves, have a structure which is based on the shapes you have learnt to draw. By 'essential lines' or 'essential shape' I

mean the simple lines or figures which are the most important parts of the shape of a thing or a creature.

Study Plates 4 to 10 and notice how a circle forms the 'essential line' of a palm tree, an oblong that of a cow, a number of triangles that of a dog; and how a number of simple straight and curved lines can show clearly a man in different positions. You will draw all of these later in the course.

2. Start with the palm tree—common in most parts of tropical countries.

(*a*) Near the top of the board draw a circle, and mark its centre.

(*b*) From the centre of the circle draw a line downwards with a very slight curve of an S shape, and long enough for the trunk of the tree. (Plate 4, top left.)

(*c*) Now draw from the centre of the circle five or six lines running out to the circumference, and all curving slightly downwards. (Plate 4, top right.)

(*d*) Next draw the leaves on these branches by a series of pairs of curved lines which meet in a point (as shown in Plate 4, bottom left). This is done by moving the chalk quickly away from and back to one side of a branch for one leaf after another.

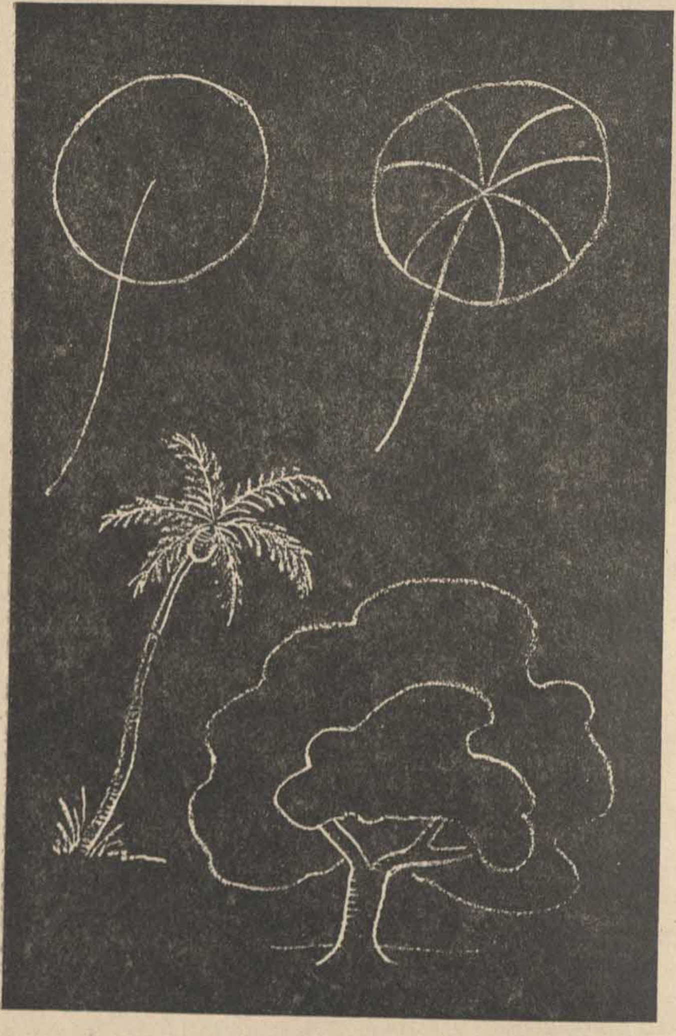


PLATE 4

(*e*) Finally, thicken the trunk with a second line, put a few cross-markings on it such as you see on palm trees, put in some grass at the base of the trunk, rub out the circle—and there is your palm tree. *But remember*—the circle was the 'essential line' on which the whole drawing was based.

3. The mango can be taken as the 'common' type of tree—and this is the way to draw it.

(*a*) First draw the trunk and two or three of the main branches leading from it. Study Plate 4, bottom right, and notice that the branches of a tree get thinner as they move upwards and away from the trunk.

(*b*) Indicate the leafy part of the tree by a series of curves (rather like the shape of clouds). Notice that the 'leafy' part of the tree should be much larger than the trunk and main branches.

4. It is a good exercise to take a pencil and paper and make sketches of various types of trees and the bigger plants. Make very simple drawings and try to get the 'essential line' of each. Go out and make such a simple sketch (remember —just the essential lines)—of a papaya tree—or a coconut palm—or a banana plant. Then come back and see if you can put a simple drawing on the blackboard that is unmistakably a papaya tree —or a coconut palm—or a banana plant.

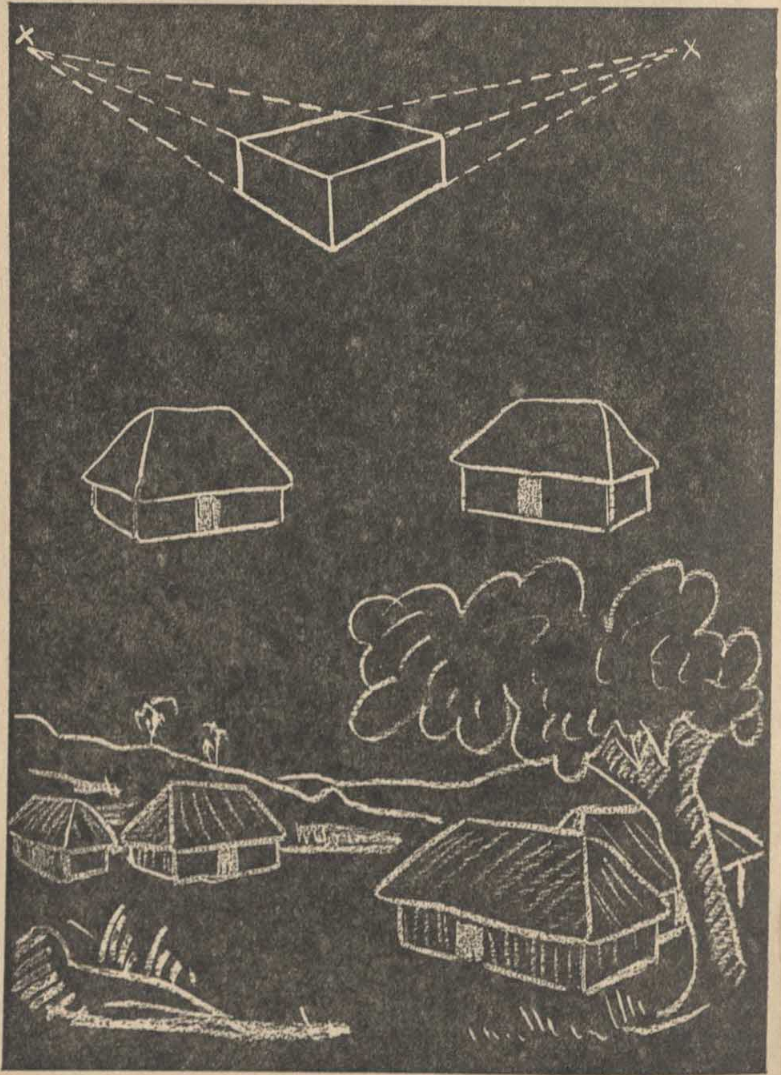


PLATE 5

5. Buildings

1. In your work on the blackboard you will often need to make pictures of simple buildings, so in this chapter we shall study the drawing of such objects as school buildings, village houses and shops.

2. Look at the drawings in Plate 5, bearing in mind the idea of 'Proportion' that we talked about in Chapter 2. Notice that the roof part of the houses is almost twice as high as the wall. (There is a good reason for this—thatched roofs have to be steep in order to keep out the rain.) Notice also that the width of the wall is three or four times its height. The drawings on Plate 5 show a number of village houses in various positions. You will see that the top drawing has some lines drawn to two points marked X. Practise drawing a cube or a rectangular solid from different viewpoints. Once you have got the basic idea of simple perspective you will find it an easy matter to draw a house, complete with roof, from any viewpoint.

3. Here is a way of drawing the hut shown in Plate 5, the one above the tree on the right.

(*a*) Draw the front wall, and make sure that the width is about four or five times the height.

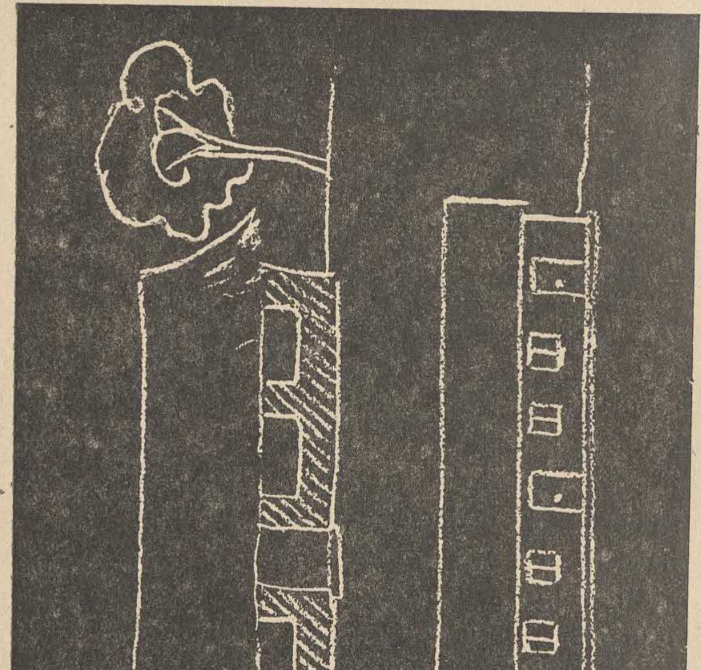


PLATE 6

Remember that the top and bottom lines of this wall, if extended, should meet at a point X.

(*b*) Put in the door, and add the necessary shading.

(*c*) Extend the top line of the wall slightly at each end. Draw a line above it and parallel to it. The length of this line should be about half the length of the top line of the wall; and the distance from the top of the wall to the line should be about double the height of the wall. Now join the ends of both lines to form the edge of the roof.

(*d*) You can now put in a second wall, at the side. Remember that the line of the side wall at the ground and the line at the roof should meet, if extended, at another point X. For your first attempts you can draw these lines in, but after some practice you will find you can dispense with them. Draw in the end lines of the side wall (remember that it is parallel to the line of the front wall), extend the roof line slightly, and join it to the top of the roof.

4. The top drawing in Plate 6 represents a village school building—also with a thatched roof, but the walls are a little higher in proportion to the roof than is the case with the hut. The walls are 'half-walls' except where the pillars go up to support the roof. This is a straightforward

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drawing and needs little explanation—but try to get the proportion right.

5. The bottom drawing in Plate 6 represents a more modern type of building with a tiled roof, such as you might have for an elementary school. Notice here that the height of the roof-part is about the same as that of the walls. Instead of having 'half-walls' this building is fitted with proper windows and doors.

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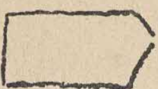
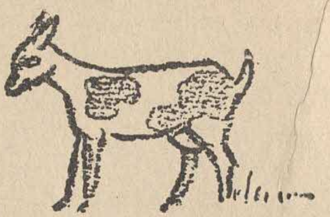
6. Animals: Oxen and Cows

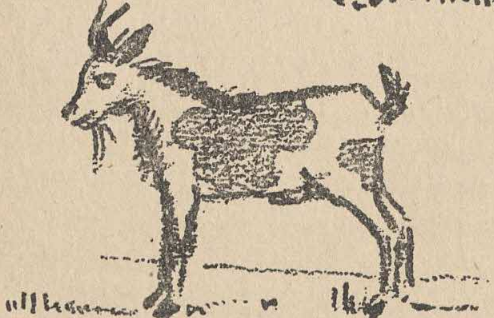
1. You remember that in Chapter 1 I said it was very important to observe things and really *see* them in order to make good pictures of them. This is especially important in the drawing of animals. You will find it very helpful to go out frequently with a few sheets of paper and a pencil and make sketches of the common animals—cows, sheep, goats, dogs, and cocks and hens.

You should also bear in mind the two guiding principles we have talked about in previous chapters: 'Essential Line' and 'Proportion'.

2. *Essential Line.* You will find that all animals have a shape or form which is characteristic of them—and these shapes are all based on those which we showed in Chapters 2 and 3. The shape of an ox or cow, for instance, is based on an oblong ▭ , that of a dog (the type of dog which is most common in the tropics) on a triangle ▷ , and that of a cock on an ellipse ○ , and so on. These basic shapes form a large part of the 'essential line' of a creature, and, if you use these shapes as guides in the drawing of animals, you will produce something on the blackboard which at least can be recognized as







the creature you are trying to represent. Study the drawings of the cow, dog and cock on Plates 7 and 8 and you will see what I mean.

3. *Proportion.* The second point to which you must give attention is that of proportion. I have already explained this term in Chapter 2. It is

important in the drawing of animals, because you have to think of the length of the body in comparison with the width, and of the length of the legs and the size of the head in comparison with the body.

These relationships are characteristic of animals, and you must get them right if your drawings are to be 'true to life'.

The ox or cow, for instance, is a heavy, solid, slow-moving animal; its body is thick, and its legs short. The horse, dog, and antelope, on the other hand, are made for running. Their bodies are thin, in comparison with the cow's body, and their legs are long and thin.

4. Let us start by making a drawing of a cow. We will do the work in three steps.

(i) Draw on the board a firm oblong shape—it should be about twice as long as it is high. Draw it fairly quickly, and if it is not quite right rub it off and do it again. It is important that this 'essential line' should be correct, or your finished drawing will be 'out of proportion'. (Plate 7, top.)

(ii) Now draw the lines which are going to be the legs. See Plate 7, top. Extend the first vertical line downwards and slightly forwards so that in length it is about half the height of the body. Draw a similar line just behind it pointing slightly

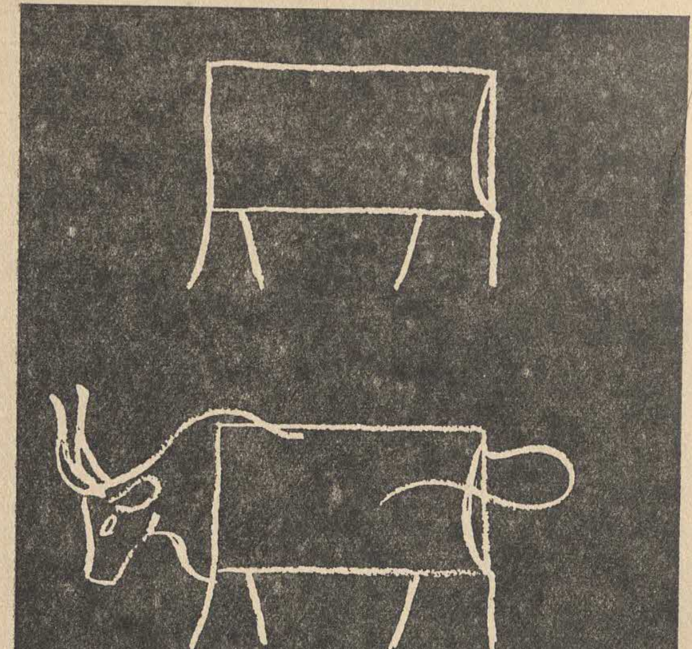


PLATE 7

backwards. Now, from just below the top right-hand corner of the oblong, draw a line curved slightly forwards and coming out just below the bottom right-hand corner, and extend it straight downwards to the same length as the other legs. Draw the fourth leg pointing slightly forwards from the bottom line of the oblong at about one third of the distance from the right-hand corner.

(iii) The neck and head are rather more difficult to draw. Remember that (*a*) the neck of the ox or cow is broad and fleshy and not very long, (*b*) the head is generally carried low—generally lower than the top line of the body, (*c*) most cattle in the tropics have a 'hump' over the shoulder.

Look at the middle drawing in Plate 7, and try to get the curves of the neck and head right. But do not spend a lot of time on this, and do not worry if your first attempt does not look much like the real thing—you will learn by practice, and especially if you give some time to sketching with paper and pencil from the live animal.

Put in the horns, the eye, the ear and the tail, and your drawing is complete. When, with practice, you have learnt to get your essential lines and your proportion right, you will be able to produce such a drawing of a cow very quickly—and often this is the sort of drawing you want to use on the blackboard. If you need a more finished picture, you will find it very easy to ‘fill out’ the drawing, rubbing out the lines you do not need, as shown in the bottom drawing. But leave the making of these ‘finished’ drawings to a later period. The important thing is that you should be able to produce correctly and quickly the middle drawing in Plate 7, and it is on this work that you should spend your practice time.

7. Other Animals

1. We shall now go on to the drawing of some of the other common animals. Each of them has its own characteristic shape—its 'essential line'—and it will help you greatly in drawing these animals if you study these shapes.

2. Look at Plate 8. You will notice that the drawing of the dog is almost entirely built up on triangles. The body is a triangle, the neck is part of a triangle, so are the head and the ears. Even the legs are almost long, narrow triangles. Using these shapes, try drawing a dog on the blackboard. You may find the head a little difficult to draw at first. Study carefully the drawing of the dog's head, and notice the 'eyebrow ridge' and the shape of the nose or 'muzzle'.

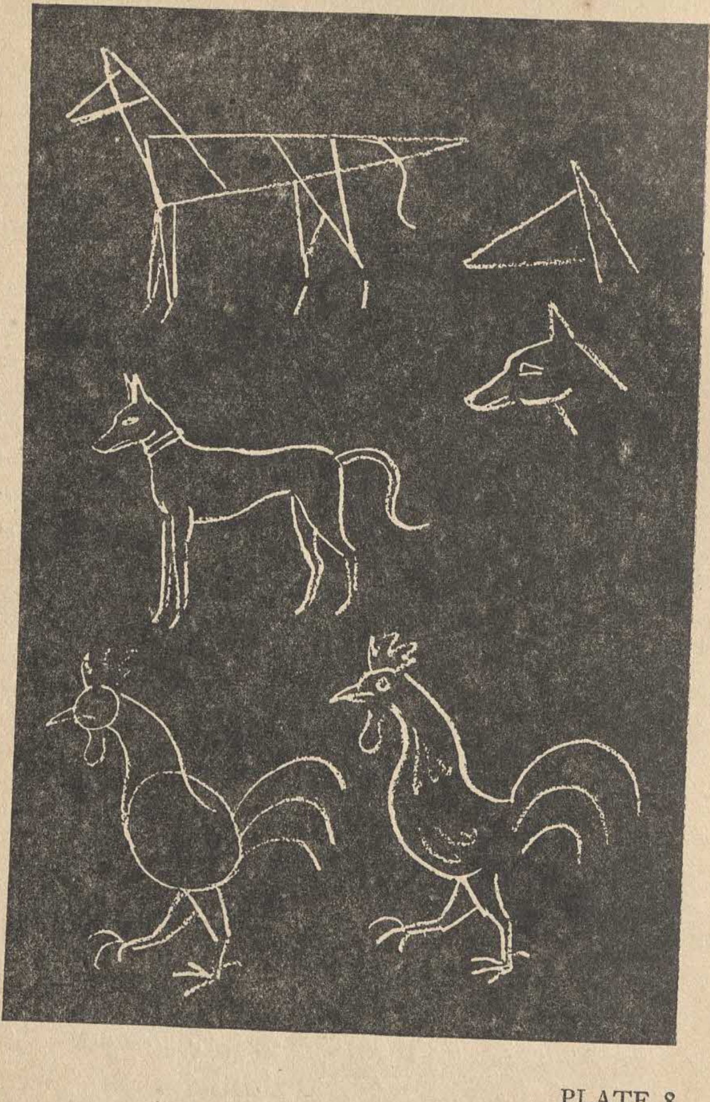


PLATE 8

3. Next try drawing a cock, after looking at the bottom pictures. I think the most characteristic lines of the cock are the lines of the neck joining the head (just a small circle) to the body. They are two smooth S lines—not parallel but getting farther apart as they move downwards to join the body. Draw the tail with three or four firm outward and downward curving lines.

4. Now go on to draw the antelope (Plate 9). There are, as you know, many different kinds of this animal, but I have chosen one of the commonest types. This is a very beautiful creature, made for running and jumping. You must make certain that you get your 'proportion' right. Notice that the basic shape of the body is like that of a bean—both the top and the bottom lines curve slightly upwards. The neck is long, the legs very long and thin, and the ears large. Study carefully the shape of the back legs.

5. There is a new and important point to which you must give close attention at this stage, while you are learning to draw animals, and later when you go on to draw people. You must remember that animals and people are living beings. If your blackboard drawings are to mean anything to your pupils, these drawings must be 'alive'. Keeping a true proportion and studying essential shape will help you to make them live. But there

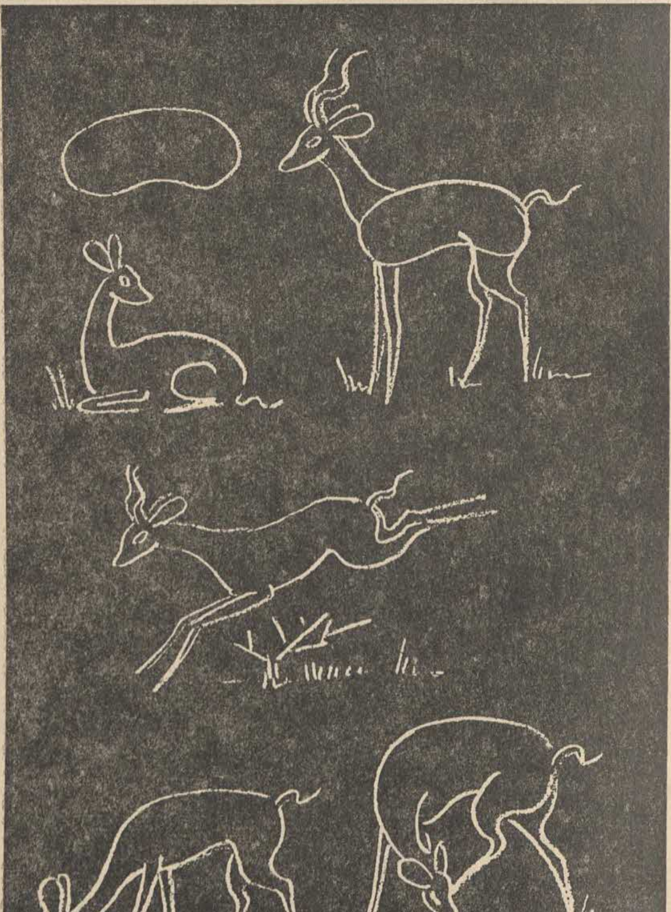


PLATE 9

is a third thing—and a most important thing—that you must show in your drawings. I call it *Attitude.* I mean by this the special position that an animal or a person takes up when he is doing a certain action. Study again the various drawings of the antelope. Notice that the 'essential line' of the body is almost the same in each drawing—but the 'attitude' of the animal shows that it is doing something different in each case. Sometimes 'attitude' is just as characteristic of an animal as essential shape. Look again at the drawing of the cock. Does not the way that he sticks out his chest and holds his head show you that he is a proud, self-confident creature?

This point will need a lot of study on your part. Keep your eyes open and watch carefully the attitude of animals and people in action. Quick sketching with pencil and paper will help you very much.

6. There is a lot of work in this chapter, and I expect you will need to spend several periods—and some of your spare time—in practising the drawing of animals. It will be time well spent. No drawings on the blackboard capture the interest of children more than really 'live' sketches of animals and people in action.

8. Matchstick Men. 'Attitude in Action'

1. The simplest and most useful drawings of people for blackboard work are 'matchstick men'. In this method you use a small circle for the head and single lines for the body and the parts of the limbs.

2. You must bear in mind the three main points we have talked about in previous chapters:

Essential line. In this case just the single lines indicating the body and limbs.

Proportion. The main facts of proportion to be remembered in drawing adult human figures are:

(*a*) The body is longer than half the leg, i.e. from the hip to the knee; but the whole leg, from the hip to the foot, is longer than the body.

(*b*) The two parts of an arm or leg can be taken as equal in length.

(*c*) The arm and hand when hanging straight downwards with the fingers outstretched reaches almost to the knee.

It is a good idea to check these facts of approximate proportion by measuring a few of your friends with a tape measure.

Attitude in action. It is most important to get the attitude right when drawing people. For this

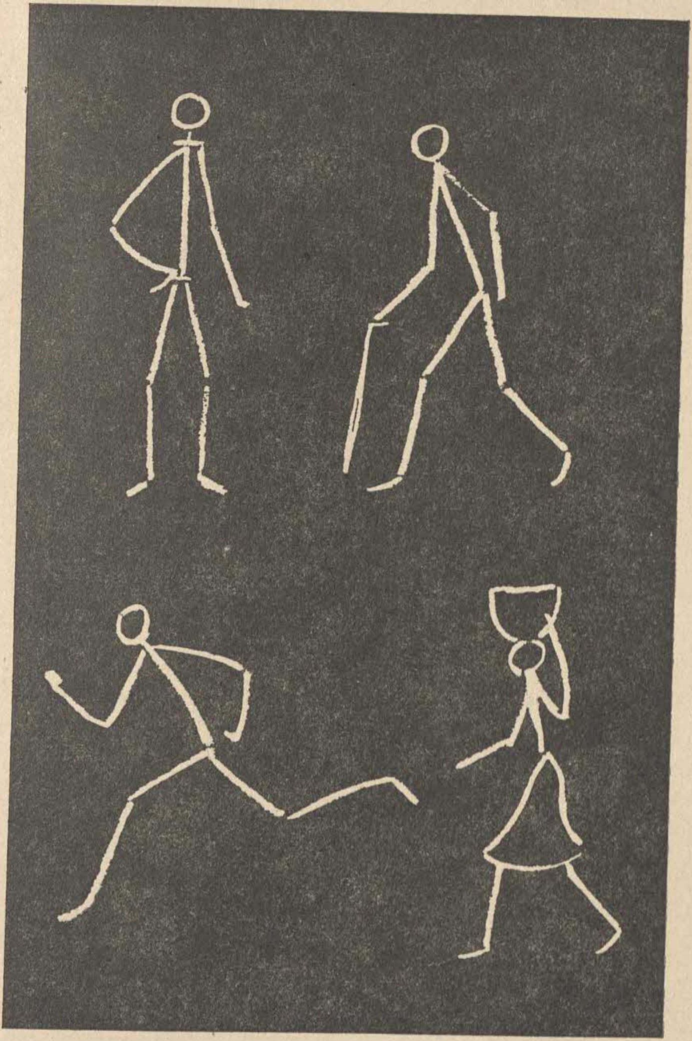


PLATE 10

reason your first drawings should be done from 'life'. If you try to draw a man walking, from memory, you will probably produce a figure in an incorrect and most unnatural position. Instead of this, get a friend to walk naturally and fairly quickly across the room, and at a word of command make him stop and remain in the walking position. (It may need two or three practice 'walks' before he can do this properly.) Now sketch him quickly on the blackboard and you will make a drawing something like the top right-hand one in Plate 10.

Notice the following points:

(*a*) The body is leaning slightly forward and is 'balanced' over the legs.

(*b*) The rear heel is lifted off the ground, and only the toe is touching.

The whole figure *suggests* forward movement.

3. Go through the same sort of exercise with the running figure (lower left). With a little practice your 'model' should be able to halt for a short while, almost in the running position.

Notice that the body leans farther forward than in the walking position, the legs are stretched farther apart, one foot being off the ground, and the arms are 'punching' to help the body forward.

4. You should then go on to draw figures in

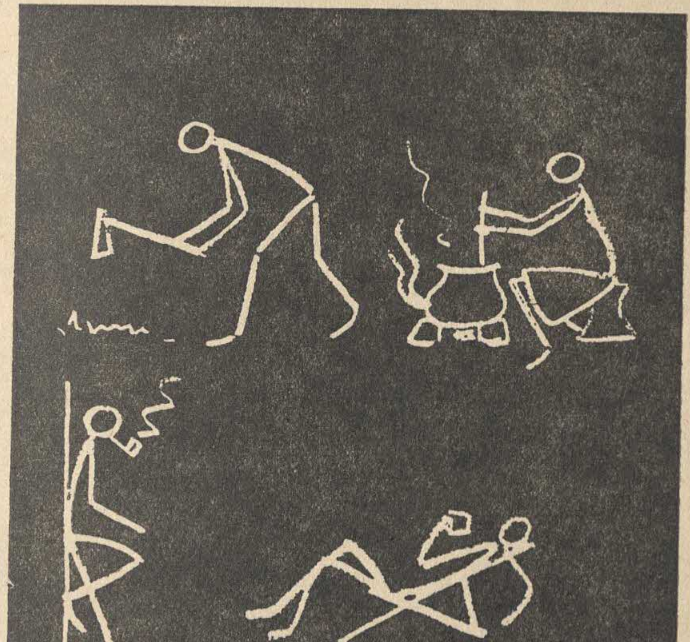


PLATE 11

the sitting position, lying at rest on the ground, digging in the garden, or riding a bicycle—in fact figures doing all the common actions of life. Here again, quickly sketching live people, with a soft pencil on paper, will help you greatly (look at Plate 11). The distinction between men and women can be shown by drawing the women in a very simple little skirt as shown in Plate 10, bottom right.

5. There is, again, a lot of work in this chapter, and the practice of these exercises will take you several periods. Make drawings as often as possible from real people. Remember Proportion, and Attitude in Action, and your figures on the blackboard will come to life.

9. Action Scenes

1. You have now learnt to draw a large number of common objects, animals, and people carrying out various actions in everyday life. You are now able to make a complete picture on the blackboard. I have illustrated in Plate 12 the sort of picture you will want to draw. Such pictures are most useful for language work, in the regional language or in the teaching of English and particularly in the early stages of oral and written composition.

2. All children love pictures. If these pictures really 'live', and show scenes and actions that are familiar to children, they are especially interested—and the gaining of interest is one of the first steps to good teaching. But the matter does not end here. If the children understand and are interested in a picture, they are stimulated to think and talk about the things that it shows and the actions that are taking place. If people are shown, the children will imagine themselves to be in the position of these people. One of the teacher's most important jobs is to stimulate his pupils to think, and to express their thoughts in speech and writing. I know of no better way of doing this in the early stages than by

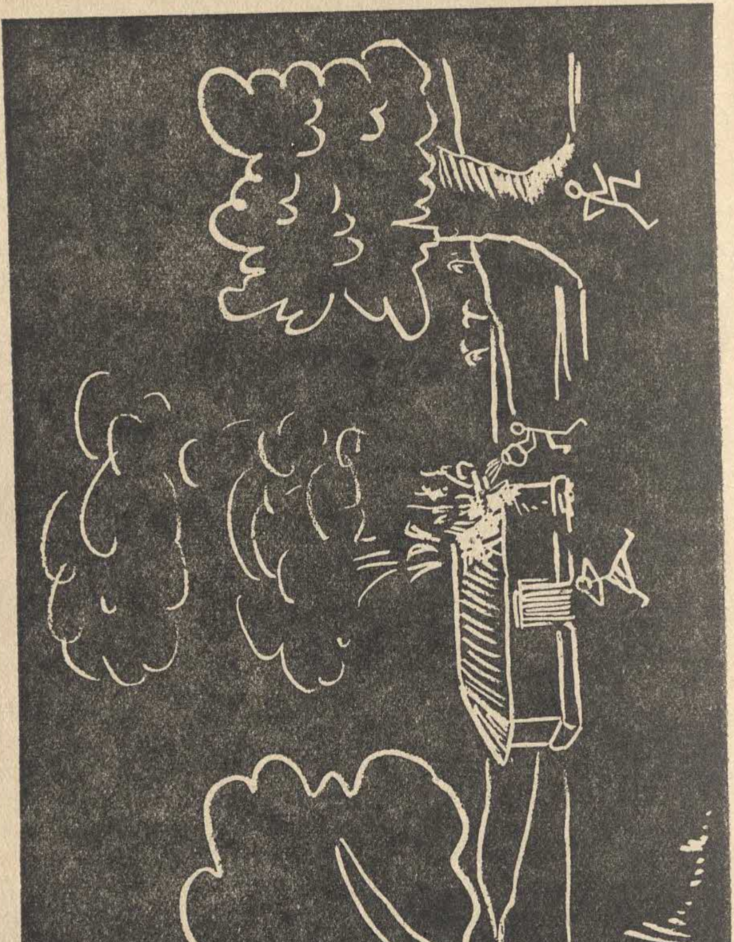


PLATE 12

presenting them with really good pictures on the blackboard.

3. Your pictures, then, should be designed with this purpose in mind. Remember the following points:

(*a*) Pictures should be *clear* and *simple.*

There should be no mistake about what the picture is intended to show. Make all your drawings clear and bold, and do not put too many objects or figures in one picture.

(*b*) The best pictures are those which show *action*, because they are most likely to stimulate children to think and talk about them. It is important that the *attitude* of your people and animals should show clearly what they are doing.

4. Study again Plate 12. Now think of a suitable subject for a similar picture bringing in some of the objects and animals and people that you have learnt to draw, and get it down on a blackboard.

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10. Blackboard Pictures for Language Teaching

1. After you have had plenty of practice in producing complete blackboard pictures, try using them as a basis for language teaching to a class of children.

2. A very good way of using such pictures is in a *serial* form—that is by building up a group of language lessons based on a set of pictures which have a central idea running through them.

For instance, you may take as the subject of your pictures the activities of a small family, Govind, the father, Asha, the mother, Ashok and Vikram the two sons. For the first lesson, when you introduce them to the class, your picture might show Govind and Ashok returning from the fields with the crop they have loaded on to their bullock cart. The second picture might show the family at work getting the crop ready for market. A third picture would show the father and son setting off to market, and a fourth their return. In further sets of pictures you can go on to illustrate various other activities of the same family. Look at the examples given in Plates 13 and 14. You will find that children will show a lively interest in the adventures of Govind and his family. They will look forward to these lessons with an eager curiosity to find out 'what will happen next', and there will be no difficulty in getting them to express themselves freely on the subjects of the pictures.

3. When the object of your lesson is to teach oral composition, or the first steps in written composition, you will require either a long wall blackboard or two separate easel boards. Any written work that you need to use—a set of sentences or of questions or of answers to questions—should be written on the left-hand board (or on the left-hand side of a long board) so that the picture is clearly visible to the class while you are working.

In the examples I have given in Plates 13 and 14, space should be left for written work *below* the pictures. But your blackboard space may not be large enough for you to write more than one or two sentences below the pictures.

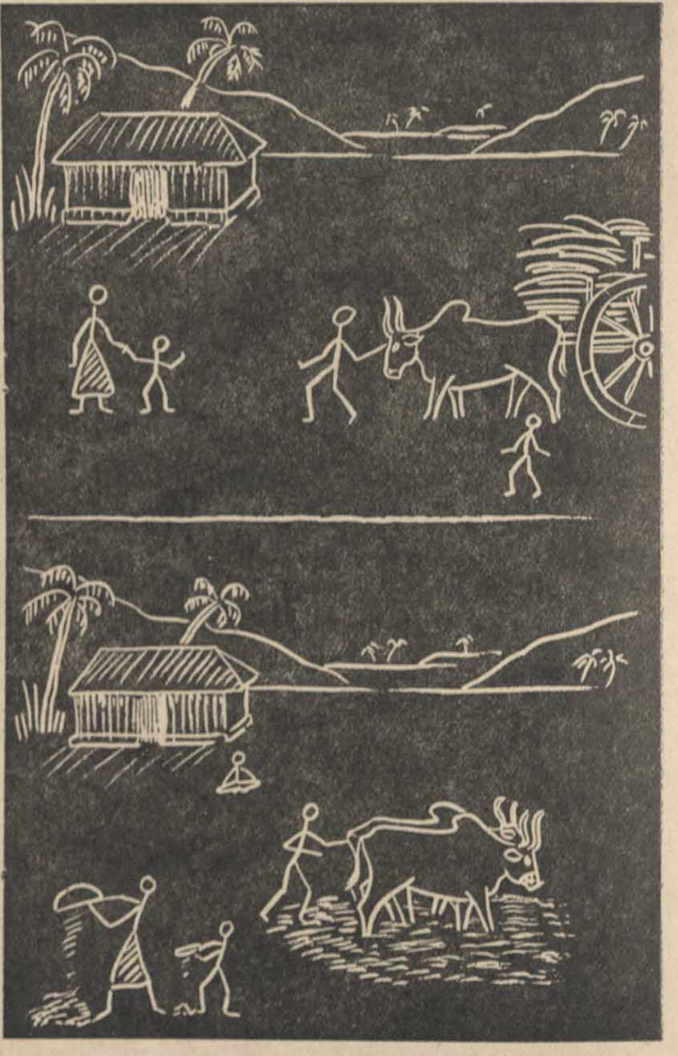
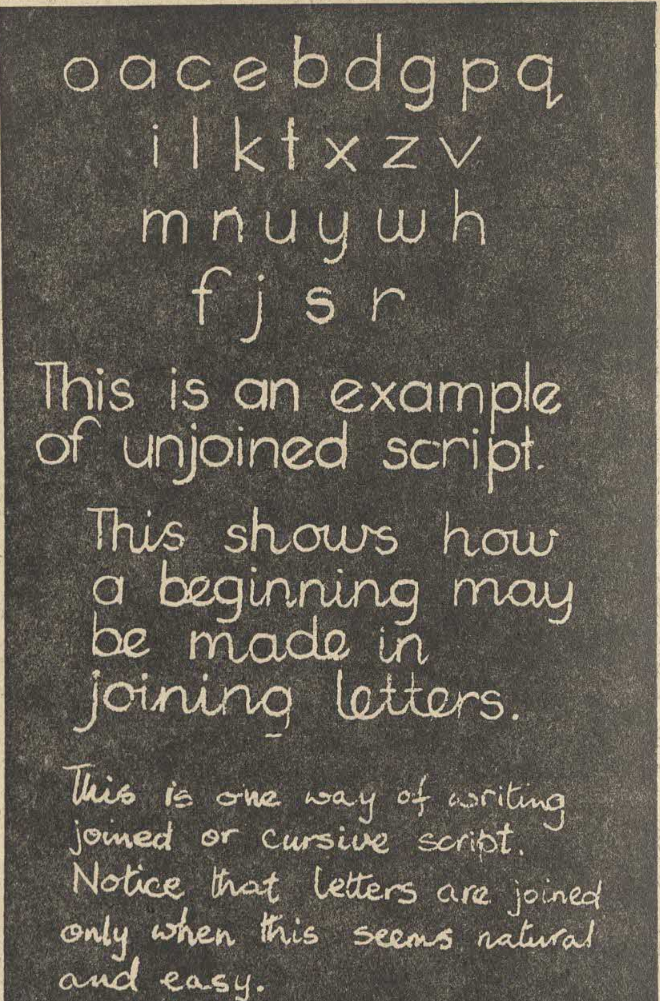


PLATE 13

PLATE 14



o a c e b d g p q
i l k t x z v
m n u y w h
f j s r

This is an example
of unjoined script.

This shows how
a beginning may
be made in
joining letters.

This is one way of writing
joined or cursive script.
Notice that letters are joined
only when this seems natural
and easy.

PLATE 15

11. Written Work

1. It is important that, whatever form of writing you teach to your pupils, you yourself should employ the same form when working on the blackboard. I am myself a strong supporter of using a simple form of *script*, both for blackboard work and as a method to be taught to children. It has the following advantages:

(*a*) It is simple.

(*b*) It is very legible.

(*c*) It is not very different from the print used in books.

(*d*) It can be taught by easy methods in the early stages.

(*e*) Pupils taught in this method usually develop a neat, legible form of writing later.

2. A form of script is shown in Plate 15. Notice that the letters fall into four groups—(*a*) those that are formed from circles, or circles and straight lines, (*b*) those that are made up of straight lines, (*c*) those that are based on the u or n forms, (*d*) the letters f, j, s and r which do not belong to any of the first three groups.

3. It is not part of the object of this book to deal with the teaching of handwriting. There are several good books on script, and teachers would

be well advised to use one of those as a guide. It is important that one form of writing should be used consistently throughout a school, and, as was said above, the teacher should use on the blackboard the same form of writing as his pupils.

4. Plate 15 shows examples of unjoined script and of cursive or running script. Unjoined script should be used on the blackboard when your main objects are boldness and particular legibility, e.g., for a very short summary, or for names on a map or a nature study diagram. Cursive script is more useful when a large amount of writing has to be put on the board, e.g., for a longer summary, for notes in an oral composition lesson, or for a series of problems in arithmetic.

5. When practising writing on the blackboard try from the beginning to work at a reasonable speed: it is a mistake to think that you will produce better writing by working very slowly. Step back from the board sometimes and look at your work from a distance: you can then make sure that your letters are uniform in size and regularly spaced. You may need to draw lines to guide you in the first place, but get into the habit of working without lines as soon as possible. The exception to this will be when you set a pattern to be copied by pupils using ruled writing-books; then of course you should draw lines on the

blackboard to correspond, as regards spacing, with those they have in their writing-books. Points to watch carefully are : (*a*) In letters which are formed from circles, true circles should be used. Do not narrow these into ellipses. (*b*) See that the 'heads' and 'tails' of your letters are not too long; if they are they will interfere with letters on the lines above and below them.

6. It is of great advantage to develop a good 'hand' on the blackboard, and you should write always with reasonable care. Remember that your work on the board is before the eyes of your pupils for several hours every day. If they never see bad writing on the blackboard they are unlikely to develop a lot of faults in their own handwriting.

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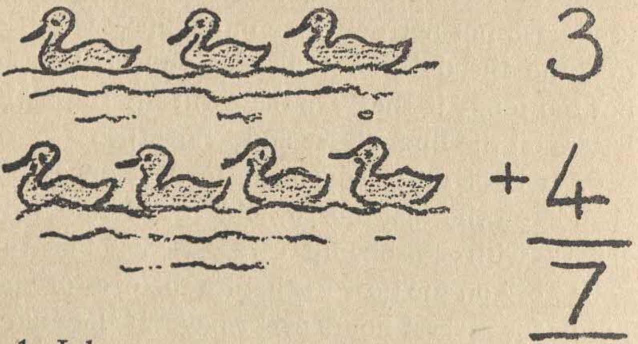
12. The Use of the Blackboard in Arithmetic



1. I have seen more careless and inefficient blackboard work in Arithmetic lessons than in any other subject. Many children find Arithmetic difficult, and it is part of the teacher's job to reduce this difficulty to a minimum. One of the ways in which he can do this is to ensure that his work on the blackboard—in the setting out of sums or problems, or in the working of them—is always clear, neat and laid out according to the correct form of each type of sum.

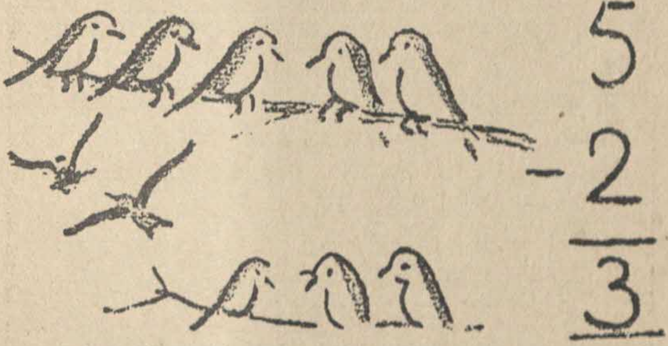
2. Points to which you should pay particular attention are the following:

(*a*) See that all figures are clear, correctly made, and large enough to be easily read by all pupils in the class.

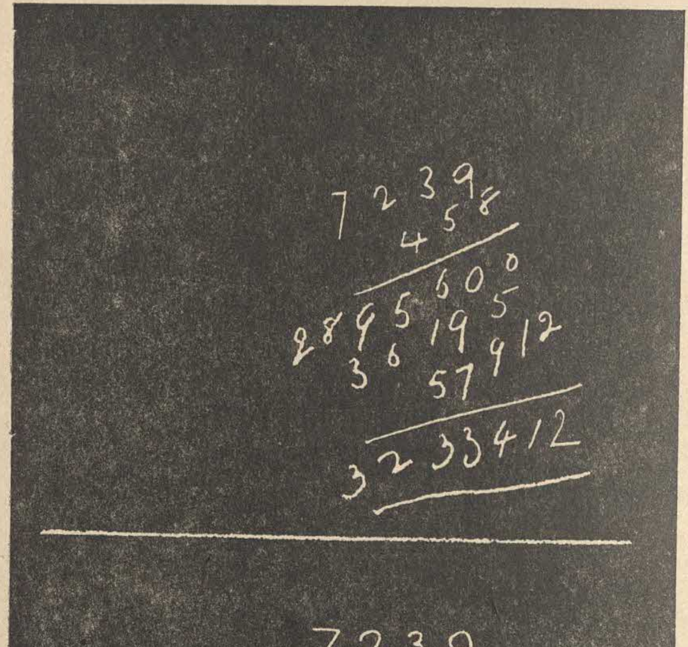
(*b*) In laying out sums, see that lines of figures are written *level* across the board and uniformly spaced.

(*c*) Make certain that figures are correctly placed in their right *columns*—i.e., units must be set accurately in the unit column, 'hundreds' in the hundred column, and so on. If this is not done carefully, mistakes are bound to occur.

(*d*) In problems where written work has to be used, see that your writing is neat and legible, and that enough words are used to make the meaning clear.



3. Compare the two examples of blackboard work shown in Plate 16. The first is so untidy and careless that it is not surprising that a wrong result is arrived at. A teacher who works in such a way has only himself to blame if his pupils produce similarly poor work—as they almost



```
   7239
    458
2895600
 361950
  57912
3315462
```

PLATE 16

certainly will. On the other hand a class of pupils which never sees blackboard work worse than that shown in the second example, will, by imitation, do equally good work.

4. There are a hundred ways in which your ability in blackboard drawing can help to make your teaching of arithmetic both more interesting and more efficient.

In the early stages of number work simple drawings of groups of common objects, of animals or of people will interest young children much more than a group of circles or 'blobs', and later you will find it essential to illustrate the teaching of such work as areas or fractions by diagrams.

In more advanced problem work, pictures can again be useful. Children frequently have difficulty in dealing with a problem, not because the arithmetical part of it is beyond them, but because they have not got a clear idea of the nature of the problem—what it is they are being asked to find out. A simple drawing or diagram will often help to make the meaning of the problem clear to them. The following are two examples of such problems, and Plate 17 shows the type of illustration that may be used to assist pupils when they are learning to work problems of this kind.

(i) A merchant buys kerosene at Rs 6.50 a tin (containing 3 gallons) and sells it at 31 n.p. a

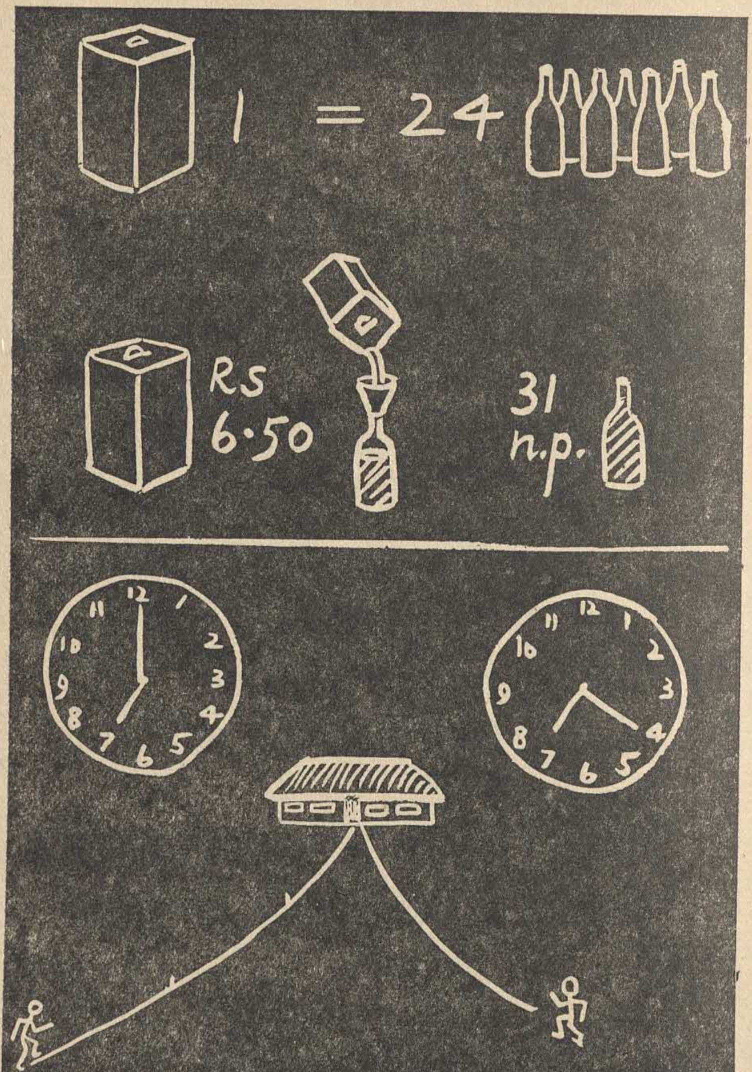


PLATE 17

pint-bottle. How much profit does he make on 20 tins?

(ii) Ravi's village is two miles from school and Anand's is three. Both walk at three miles an hour. If Ravi sets off at twenty past seven, and Anand at seven o'clock, who will get to school first?

13. The Use of the Blackboard in Geography. 1: Plans

1. A large part of Geography is concerned with plans and maps—with map-making and map-reading—and it is in this connexion that the blackboard can be a great aid to your teaching.

2. It is usual when beginning this work to introduce children to the meaning of simple plans, and to get them to understand the difference between plans and pictures. You will probably begin by drawing the plan of an object such as a desk or a table, and then go on to make a plan of the classroom with desks, table, door, windows and other large objects in their correct position. It will be necessary for your pupils gradually to learn the ideas of *proportion* and *direction*, and I think it is a help if you first of all work with a blackboard in a horizontal position in the middle of the classroom with the children grouped round you. Even when you go outside to make a plan of the school, showing its various buildings, paths, playgrounds and gardens, it may be helpful to use the blackboard in a horizontal position on the ground or on a table. Very soon your pupils will have no difficulty in understanding that the top of a wall blackboard, or of a page in their

books, is generally taken to indicate the north direction, the bottom the south, and so on.

3. In all this early work on plans and simple maps, use firm clear lines on the blackboard, pay close attention to reasonable correctness of proportion and direction, and do not make your drawings confusing by putting in too much detail. If it will help to make your plans more clearly understood by using coloured chalk, e.g. blue for a river, green for a cultivated area, then do so, but do not introduce colour just for the sake of colour. An example of a blackboard sketch-map is shown in Plate 18.

4. When your class has reached the stage of making sketch-maps of the area round about the school, it will be necessary to teach two new ideas—*symbols* and *scale*. Symbols are the signs we use on maps to show objects of importance such as villages, special buildings, e.g. temple, mosque, district headquarters, post office, bridges, areas of cultivation, river crossings. It is important that one set of symbols should be chosen (preferably those in use on printed maps of your area), and you will need to demonstrate these clearly on your blackboard maps so that they become thoroughly understood.

The idea of scale follows on that of proportion, and it will take your pupils some time to under-

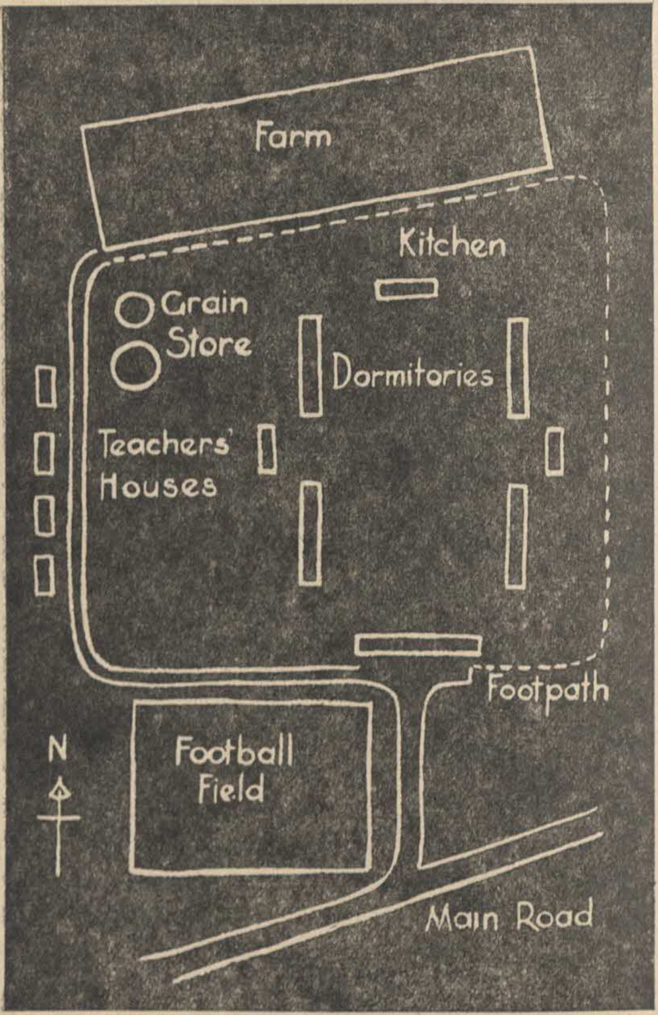

Farm
Kitchen
Grain
Store
Dormitories
Teachers'
Houses
Footpath
N
Football
Field
Main Road

PLATE 18

stand it fully. The meaning of distance on a map can most easily be understood by thinking of the time it takes to walk from one place to another, and related work in Arithmetic lessons will help your pupils to grasp the whole subject of proportion and scales more quickly.

14. The Use of the Blackboard in Geography. II: Maps

1. More advanced work in Geography will deal with larger areas which cannot be mapped by your pupils, with district, province, country, or continent. For these areas, there will generally be printed maps, and from these you will be able to get a lot of geographical information. But you will certainly often need to draw sketch-maps of these areas on the blackboard in order to make clear to a class special features which connot all be shown on one map. For instance when you are studying India as a whole, you will need sketch-maps to show the relation between rainfall and vegetation or between vegetation and the number of people in a given area; or to show the places where large numbers of cattle are kept, or areas where rice is grown, and so on. We will now study a method whereby you can learn to draw these sketch-maps quickly and with reasonable accuracy.

2. Get out your atlas and examine the map of India. Draw a triangle starting at Cape Comorin. One side of the triangle will go N.W., passing through Hubli, Surat and Ahmedabad, and continuing N. almost as far as Jaisalmer; that is,

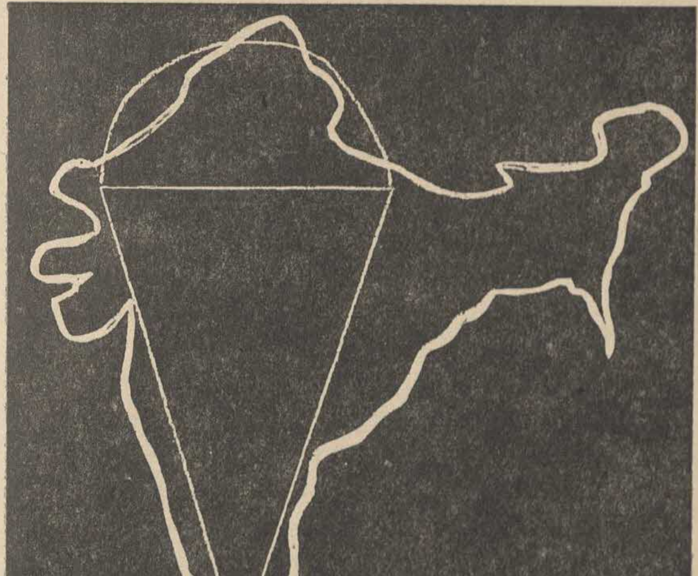


PLATE 19

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roughly level with Hyderabad in Sind. The other side of the triangle will go N.E. through Guntur as far as Patna. Join the two corners of the triangle, and above them draw a semicircle, as in Plate 19. Use this triangle and semi-circle as a skeleton on which to build your map of India. If you like you can divide the whole figure with two horizontal lines, as in A, Plate 19. These are lines of latitude, 16° and 24°. Latitude 16° crosses the eastern side of your triangle at a point near the mouth of the river Krishna, and from here the coastline slopes away to the East and to Calcutta. If you like you can draw this coastline freehand, or put in another triangle to help you, as at B, Plate 19.

3. Now try to practise this a few times on the blackboard, putting in your two triangles and semi-circle with very faint lines and then adding the coastline more thickly. Notice that both coastlines curve out towards the sea, and that Gujerat and Kutch are both 'extras'; note also the oblong space left in the northern border by Nepal.

4. This method of 'measuring up' from printed maps, comparing distances, and selecting guiding lines and shapes—again *essential lines*—will help you to draw almost any sketch-map. When you have practised each one several times, you will

find yourself able to draw reasonably correct maps in a very few minutes.

5. Try making a map of the southern part of India, south of Pondicherry, showing the chief railway lines. If you look at your atlas you will see that the important guide lines are latitudes 12°, 10° and 8°, and longitudes 76°, 78° and 80°.

Draw these in and mark the main points of the coastline at Pondicherry, Rameswaram, Cape Comorin and Cochin. Once you have fixed these, filling in the coastline between them is fairly easy. Mark in Madurai, which is nearly on the intersection of 10° and 78°, and then put in Trichinopoly and Trivandrum. Note that these three towns are almost in a straight line.

This is a more difficult map than that of the whole of India, but you will find that with a little practice you can make a presentable map of any part of India with very little difficulty.

6. The value of this study will be plain to you when you find that you are able to produce on the blackboard sketch-maps of any country you are dealing with, in a very short time and without having to rely on printed maps, except as an occasional check on correctness.

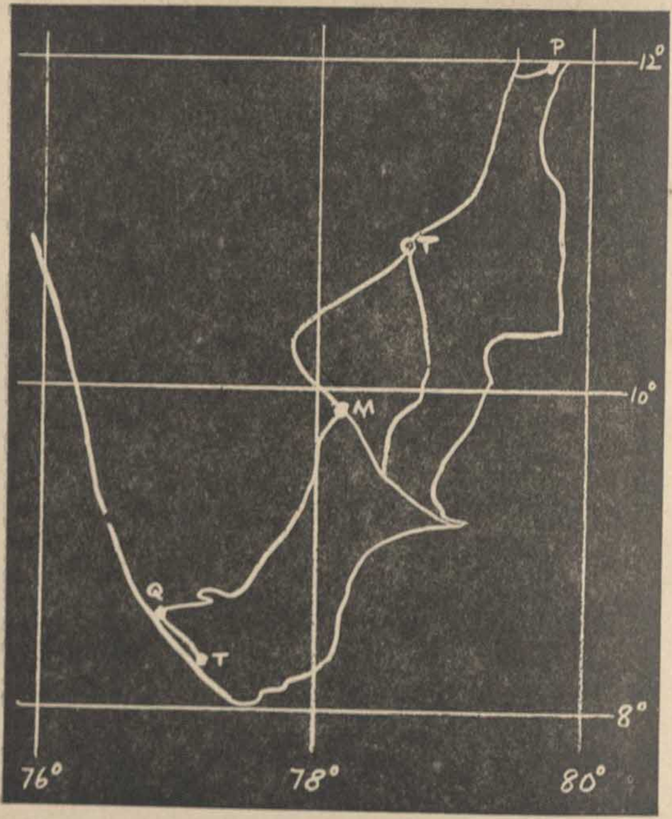


PLATE 20

15. The Use of the Blackboard in Nature Study

1. The main use of the blackboard in Nature Study (in which I include such subjects as Agriculture and Hygiene) is for the production of explanatory diagrams. These diagrams should be drawn *after* the examination of the objects which are being studied by the pupils. Their purpose generally is to *supplement*—not take the place of such observation. There are, for instance, details of plant and insect structure which are so small that they are difficult to make out with the naked eye. Your diagrams will enlarge these points and make them clear to your class.

2. Good diagrams should be:

(*a*) Bold and clear.

(*b*) Large enough to be seen easily by all pupils in the class.

(*c*) As simple as possible.

(*d*) Clearly and correctly labelled.

Bear in mind that your main object is not to make a nice picture of a plant or creature, but to make clear the main points of structure, in order to help your pupils to understand how the plant or creature is made up, and the function of its various parts.

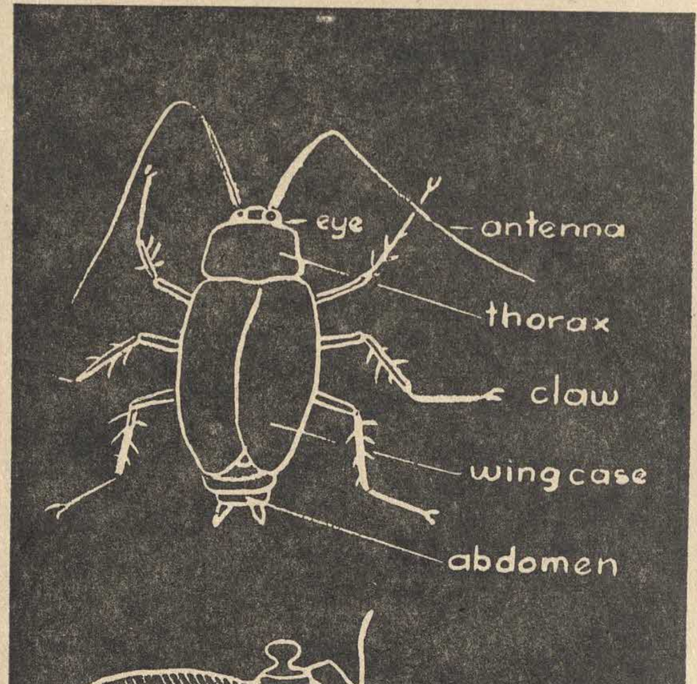


PLATE 21

The labels should be written clearly in unjoined script, level across the board, and if necessary a line should be drawn exactly from the part to its label.

3. I have given two examples of diagrams on Plate 21. Practise making similar diagrams to illustrate the details of the common plants and creatures that you deal with in your Nature Study, Agriculture or Hygiene syllabus.

pot

cow

grass

The cow is eating.

It is eating grass.

16. The Making of Reading-Cards

1. If you have followed the course outlined in this book, and have learnt the methods of blackboard drawing and writing described, you will be able to make a very useful application of the skills you have mastered in the making of reading-cards for the 'Look and Say' method of teaching reading.

2. The cards should be made in two sets: (*a*) The set for use in the first stages of reading can be quite small—say four inches by three inches. Make a bold simple drawing of some common object at the left-hand side of the card, and write its name in script (unjoined) on the right-hand side. On the back of the card write only the word, without the picture. (*b*) The second set of cards, for a more advanced stage in reading, should be larger—at least five inches by four inches. On the left-hand side, and towards the top, make your drawing. To the right of it write the names of two of the things seen in the drawing. At the bottom of the card write two or three very simple sentences describing the picture. Again on the back of the card, write the words and the sentences without the picture.

3. On the opposite page I have given two

examples of cards, one for the first stage and one for the second. It is important that the pictures in the second stage should show some action, so that, in describing them, sentences with real meaning can be written. It is also a good idea to make your pictures with coloured pencils, as this adds interest for young children and will make your drawings more clearly understood.

4. The sets of cards need to be carefully worked out so that you only use words that the children already know. The sentences also in the second-stage cards should be based on the forms of everyday speech as used by your pupils. The wording in the examples given is in English, but of course the method can be used for any language.

5. As the reading-cards will be passed from child to child and will receive a great deal of handling, it is preferable to make them of fairly stiff cardboard. If nothing else is available old cigarette packets can be used, but they are not really satisfactory as they do not provide a good drawing surface, and you cannot write on the back. While you are practising, of course, any pieces of paper will do.

One word of warning. Do not begin to make a final set of cards for actual use in teaching until you are able to write script really well. It is most important that the lettering on your cards should be neat and regular.

Appendix A: To the Instructor

Blackboard and chalk form the most potent piece of apparatus available to the teacher in the practice of his craft. Recent years have seen the development of more mechanical forms of visual aid, some of which serve a most useful purpose. But their function in all cases is of a specialized nature—they can never take the place of the blackboard and chalk in the day-to-day practice of teaching, nor can they ever have anything like the same importance for the average teacher in the elementary standards.

This being so it is surprising that more emphasis is not given to instruction in the use of the blackboard at many teacher-training colleges. It is not uncommon to hear from an otherwise competent schoolmaster some such remark as, 'Of course I am quite hopeless on the blackboard.' This is surely an extraordinary admission, and equivalent to a confession by a doctor that he is useless with a stethoscope, or by an engineer that he cannot manage a slide-rule. It is associated with the attitude of mind which believes that ability in drawing is an entirely inherited gift and that one cannot learn to draw, or that, if one is a poor writer, nothing can be done about it.

This is a doctrine to which I do not subscribe. While admitting that you cannot create an artist by training, I believe (and have proved it in experience) that any person of normal intelligence who is genuinely anxious to learn can be taught to draw with reasonable competence—certainly to a degree of competence which makes it worth while for him to use his drawing as an aid to his instructional or teaching work. With sound tuition during a training college course of two years, out of a class of students of average intelligence, you may expect to produce 20–25 per cent experts in blackboard work, and 50 per cent of adequate ability. The teacher who has a sound grounding in blackboard technique, and plenty of practice behind him, is a much more confident person in the classroom than the teacher who has not these advantages. In addition to the facility with which he can produce the writing, figure work, pictures and diagrams which will accompany many of his lessons as a matter of course, he will develop the habit of turning to the board on a hundred and one occasions to explain an idea or press home a point in a graphic manner. The sight of a young teacher standing helplessly before a class with a piece of chalk in his hand and a blank blackboard in front of him may frequently be an indictment of the system under which he was trained.

There is one other very cogent reason why we should devote serious attention to this part of a teacher's training. It is not perhaps sufficiently appreciated that the constant sight of a filled blackboard has an enormous effect on a class of children for harm or for good. In formal class-room periods, the blackboard is in front of the eyes of a class for several hours every day, and for a large part of this time their attention must be directed to it. If it is regularly covered with slipshod, untidy and incompetent work, this standard will come to be accepted as normal by the class, and unconsciously assimilated as a pattern for their own work. On the other hand, pupils who never see anything on the blackboard other than neat fine writing, well laid out sums and efficient pictures and diagrams, will take this as the normal standard and will tend to reproduce it themselves.

The course of blackboard work outlined in this book is mainly based on experience of teaching the subject to teachers under training, both in college and on refresher courses. Its main purpose is to serve as a guide for teachers in training and for trained teachers who want to improve their own blackboard work or that of young teachers working under them. In a training college it is intended to cover a two-year course, assuming that something like two periods a week, plus ample practice time, are devoted to the subject.

It is important for both types of student that they should work steadily through the course, and attempt the more advanced work only when they have mastered by constant practice the groundwork in the first three chapters.

Appendix B: The Blackboard Room in the Training College

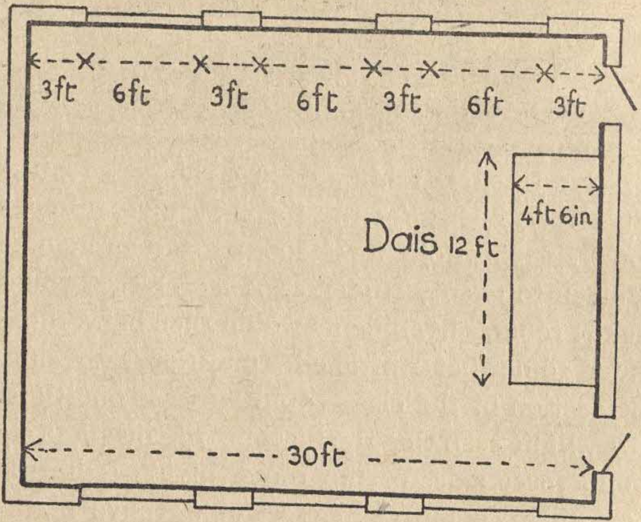
1. No teacher-training college should be without a blackboard room. Page 76 gives dimensional specifications for a room to accommodate eighteen to twenty students. A larger class could use the room, but students would then be working under somewhat restricted conditions, or only one section of the class could work at one time.

It will be seen that the blackboard runs entirely round three sides of the room, giving (allowing for corners) about eighty feet of effective blackboard length. Windows are placed above blackboard level. If there is a large amount of roof overhang, it may be necessary, in order to provide enough light, to have windows also in one end wall. In very hot climates it will also be necessary to have ventilators in the wall below the blackboard. These are shown on the elevation sketch on page 76.

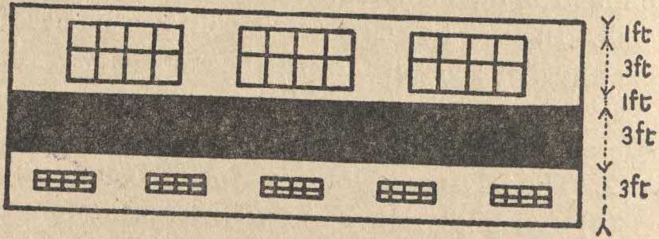
2. The advantages of this type of room are:

(*a*) A complete class of trainees can work at once, thus saving time and affording the maximum amount of practice for each student.

(*b*) All students have an uninterrupted view of the demonstration blackboard.



Plan



Inside Elevation

(*c*) The work of all students can be seen by the instructor at one time, thus facilitating the assessment of relative standards and the demonstration of faults and points of merit.

(*d*) The centre of the room, being unencumbered with easel blackboards, can be furnished with tables. It can then serve the dual purpose of a blackboard room and a place for handwork and the construction of teaching apparatus.

3. It is recommended that blackboards be constructed in cement. The final coat (of about an eighth of an inch thickness) should be of almost pure cement, mixed with lampblack, and finished as smooth as possible. This obviates the necessity of using blackboard paint.

It is not advisable to fit wooden rails at the base of the board, as they interfere with work on the blackboard. Instead, a small recess should be constructed in the wall just under the board, to hold chalk and blackboard cleaner.

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